

Specification Amendments

IN THE SPECIFICATION:

Please amend the paragraph starting at page 2, line 9 and ending at line 22 as follows.

131 --In image forming apparatus using the electrophotographic image forming process, there has heretofore been adopted a process cartridge system in which an electrophotographic photosensitive member and process means for acting on the electrophotographic photosensitive member are integrally made into a cartridge, which is made detachably mountable to the main body of the image forming apparatus. According to this process cartridge system, ~~one~~ maintenance of the apparatus can be done by a user himself without resorting to a serviceman and therefore, the operability of the apparatus could be markedly improved. So, this process cartridge system has been widely used in the image forming apparatuses.--

Please amend the paragraph starting at page 5, line 27 and ending at page 6, line 11 as follows.

132 --It is another object of the present invention to provide a driving-force transmitting part provided at a lengthwise end of an electrophotographic photosensitive drum, and having a twisted projection ~~of which the~~ whose cross-section has a plurality of corners, a shaft portion supported by a bearing ~~portions~~ portion, and a gear portion for transmitting a driving force to a developing roller, the shaft portion and the gear portion overlapping each other in the axial direction of the electrophotographic photosensitive drum, an

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electrophotographic photosensitive drum, a process cartridge and an electrophotographic image forming apparatus.--

Please amend the paragraph starting at page 7, line 3 and ending at line 4 as follows.

B3
--Fig. 6 is a ~~partly developed~~ partial cross-sectional view of the process cartridge of Embodiment 1.--

Please amend the paragraph starting at page 7, line 24 and ending at page 8, line 13 as follows.

B4
--When the process cartridge 2 is mounted to the image forming apparatus 1, an exposure device (laser scanner unit) 3 is mounted above the process cartridge 2, and a sheet tray 4 containing therein recording ~~mediums~~ media (sheets) P on which image formation is to be effected is disposed on the inner side (the right side as viewed in Fig. 1) of the process cartridge 2. Further, in the image forming apparatus 1, a feed roller 5, a transfer guide 6, a transfer device 7, a transporting guide 8, a fixing device 9, a pair of delivery rollers 10, and a delivery tray 11 are disposed along the transporting direction of the sheet P. The process cartridge 2 integrally contains therein four ~~kings~~ kinds of process devices, i.e., an electrophotographic photosensitive drum (hereinafter referred to as the photosensitive drum) 20, a charging device 30, a developing device 40 and a cleaning device 50.--

Please amend the paragraph starting at page 11, line 19 and ending at page 12, line 3 as follows.

B5 --A hole 211b is formed in the axis portion of the first flange 210, and ~~an earth a~~ grounding pin 215 is forced in this hole 211b. ~~An earth~~ A grounding plate 216 is attached to the inner end surface of the first flange 210, and the drum cylinder 200 and the protrusion side ~~and end~~ surface 215a of the ~~earth~~ grounding pin 215 ~~electrically~~ electricity conduct to each other. The second flange 220 is rotatably supported by a drum shaft 350 (see Fig. 9) fitted in the central hole 220b thereof. This drum shaft 350 is fixed to a frame 2a shown in Figs. 4 and Fig. 9. The fixing of the first and second flanges 210 and 220 to the drum cylinder 200 is done by caulking, adhesive securing or force-fitting.--

Please amend the paragraph starting at page 13, line 10 and ending at page 14, line 1 as follows.

B6 --The transfer device 7, as shown in Fig. 6, is comprised of a transfer roller 70 having an electrically conductive coating layer formed on the outer periphery of a core material, a transfer roller gear 71 fixed to one end portion of the transfer roller 70, and transfer bearings 72 and transfer springs 73 disposed on the opposite ends of the transfer roller 70. The transfer roller gear 71 cooperates with the second gear of the photosensitive drum 20 to form a gear train, and the transfer roller 70 is rotatively driven while being biased toward the photosensitive drum 20. Also, at least one transfer bearing 72 and at least one transfer spring 73 together form an electric power supply path, and in case of image formation, a predetermined transfer bias is supplied to the transfer roller 70. The transfer bearings 72 are movably provided on a guide, not shown, in a direction linking the

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centers of the photosensitive drum 20 and the transfer roller 70 together. The guide is provided in the image forming apparatus 1.--

Please amend the paragraph starting at page 16, line 26 and ending at page 17, line 6 as follows.

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--As shown in Figs. 5 and 6, an electrically grounded earth grounding contact 102 is provided in the central portion of the driving shaft 100. The earth grounding contact 102 is biased toward the process cartridge 2 side by biasing means, not shown. When the process cartridge 2 is mounted, the earth grounding contact 102 contacts with the protrusion side end surface 215a of an earth a grounding pin 215, and the drum cylinder 200 is electrically grounded.--

Please amend the paragraph starting at page 17, line 12 and ending at line 22 as follows.

138
--The ~~protrusions~~ protrusion 211, as previously described, is the driving-force transmitted means and has a twisted prism shape ~~of which the~~ whose cross-section is a substantially equilateral triangle. The first gear portion 213, as previously described, cooperates with the developing roller gear 44 to form a gear train, and transmits the driving force transmitted thereto from the protrusion 211 to the developing roller gear 44. The first coupling portion 214 is a coupling portion to the drum cylinder 200, and the first flange 210 is fixed to the drum cylinder 200 by the first coupling portion 214.--

Please amend the paragraph starting at page 19, line 21 and ending at line 22 as follows.

139 --The above-described embodiment will be summed up and complemented
described as follows.--

Please amend the paragraph starting at page 19, line 23 and ending at line 27 as follows.

1310 --Firstly, the electrophotographic photosensitive drum 20 is used in the process
cartridge 2 detachably mountable to the main body 14 of the electrophotographic image
forming apparatus for forming an image on a sheet P which is a recording medium, ~~the~~
The main body 14 having has--

Please amend the paragraph starting at page 20, line 7 and ending at line 11 as follows.

1311 --the recess 101 provided in the central portion of the main body gear and rotated
with the main body gear and which is a non-circular twisted hole ~~of which the~~ whose cross-
section has vertices 211c which are a plurality of corners, ~~and~~--

Please amend the paragraph starting at page 20, line 12 and ending at line 13 as follows.

1312 --the The electrophotographic photosensitive drum 20 having has--

Please amend the paragraph starting at page 21, line 11 and ending at line 17 as follows.

-B13
--the protrusion 211 which is a non-circular twisted projection fitted into the recess 101 which is a hole provided in the main body 14 of the apparatus to receive the transmission of the driving force from the main body 14 of the apparatus when the process cartridge 2 is mounted to the main body 14 of the apparatus and ~~of which the~~ whose cross-section has a plurality of corners 211c, and--

Please amend the paragraph starting at page 21, line 18 and ending at line 22 as follows.

B14
--~~wherein an~~ An area rotatably supported by the bearing portion 302 overlaps an area in which the helical gear 213 is provided when the photosensitive drum 20 is mounted in the process cartridge 2 in the axial direction thereof, and--

Please amend the paragraph starting at page 22, line 12 and ending at line 18 as follows.

B15
--Thirdly, the photosensitive drum 20 further has the ~~earth~~ grounding pin 215 as an ~~earth~~ a grounding member for grounding the photosensitive drum 20 to the main body 14 of the apparatus when the process cartridge 2 is mounted to the main body 14 of the apparatus and which is provided at the center of the driving-force transmitting part 210 through the same in the axial direction thereof.--

Please amend the paragraph starting at page 23, line 2 and ending at line 7 as follows.

B16 --Sixthly, the shape of the protrusion 211 is a substantially equilateral triangular prism, and the protrusion vertices 211c which are the corners of the substantially equilateral triangular prism are chamfered, and the protrusion 211 is fitted in the hole 101 of which the whose cross-section is a substantially equilateral triangle.--

Please amend the paragraph starting at page 23, line 8 and ending at line 11 as follows.

B17 --Seventhly, the process cartridge 2 is detachably mountable to the main body 14 of the electrophotographic image forming apparatus 1 for forming an image on a sheet P which is a recording medium, the. The main body 14 having has--

Please amend the paragraph starting at page 23, line 18 and ending at line 21 as follows.

B18 --the recess 101 provided in the central portion of the main body gear and which is a non-circular twisted hole rotated with the main body gear and ~~of which the~~ whose cross-section has a plurality of corners 211c;--

Please amend the paragraph starting and ending at page 23, line 22 as follows.

B19 --wherein the The process cartridge 2 comprises--

Please amend the paragraph starting at page 24, line 22 and ending at page 25, line 1 as follows.

1320 --the protrusion 211 which is a non-circular twisted projection fitted into the recess 101 which is a hole to receive the transmission of the driving force from the main body 14 of the apparatus when the process cartridge 2 is mounted to the main body 14 of the apparatus, and ~~of which the~~ whose cross-section has a plurality of corners 211c, and--

Please amend the paragraph starting at page 25, line 2 and ending at line 6 as follows.

1321 --~~wherein an~~ An area rotatably supported by the bearing portion 302 overlaps an area in which the helical gear 213 is provided when the photosensitive drum 20 is mounted in the process cartridge 2 in the axial direction thereof, and--

Please amend the paragraph starting at page 25, line 26 and ending at page 26, line 5 as follows.

1322 --Ninthly, the photosensitive drum 20 further has the ~~earth~~ grounding pin 215 which is ~~an earth~~ a grounding member for grounding the photosensitive drum 20 to the main body 14 of the apparatus when the process cartridge 2 is mounted to the main body 14 of the apparatus, and which is provided at the center of the driving-force transmitting part 210 through the same in the axial direction thereof.--

Please amend the paragraph starting at page 26, line 22 and ending at line 26 as follows.

1323 --Thirteenthly, the driving-force transmitting part is used in the process cartridge 2 detachably mountable to the main body 14 of the electrophotographic image forming apparatus 1 for forming an image on a sheet P which is a recording medium; ~~the~~. The main body 14 ~~having~~ has--

Please amend the paragraph starting at page 27, line 6 and ending at line 10 as follows.

1324 --the recess 101 which is a non-circular twisted hole provided in the central portion of the apparatus main body gear and rotated with the main body gear and ~~of which the~~ whose cross-section has vertices 211c which are a plurality of corners, ~~and --~~

Please amend the paragraph starting at page 27, line 11 as follows.

1325 --~~the~~ The driving-force transmitting part ~~having~~ has--

Please amend the paragraph starting at page 28, line 4 and ending at line 10 as follows.

1326 --the protrusion 211 which is a non-circular twisted projection fitted into the recess 101 which is a hole to receive the transmission of the driving force from the main body of the apparatus when the process cartridge 2 is mounted to the main body 14 of the apparatus and ~~of which the~~ whose cross-section has a plurality of corners 211c, ~~and --~~

Please amend the paragraph starting at page 28, line 11 and ending at line 19. A marked-up copy of this paragraph, showing the changes made thereto is attached.

B27 ~~--wherein when~~ When the photosensitive drum 20 is mounted in the process cartridge 2 in the axial direction thereof, an area rotatably supported by the bearing portion 302 overlaps an area in which the helical gear 213 is provided, and the driving-force transmitting part transmits the driving force received from the main body 14 of the apparatus through the hole 101 and the projection 211 to the cylinder 200 through the helical gear 213 and the spur gear 221, and--

Please amend the paragraph starting at page 29, line 4 and ending at line 10 as follows.

B27 --Fifteenthly, the photosensitive drum 20 further has the ~~earth~~ grounding pin 215 which is ~~an earth~~ a grounding member for grounding the photosensitive drum 20 to the main body 14 of the apparatus when the process cartridge 2 is mounted to the main body 14 of the apparatus, and which is provided at the center of the driving-force transmitting part 210 through the same in the axial direction thereof.--

Please amend the paragraph starting at page 29, line 20 and ending at line 25 as follows.

B27 --Eighteenthly, the shape of the protrusion 211 is a twisted substantially equilateral triangular prism, and the corners 211c of the substantially equilateral triangular prism are chamfered, and the protrusion is fitted into the hole 101 ~~of which the~~ whose cross-section is a substantially equilateral triangle.--

Please amend the paragraph starting at page 29, line 26 and ending at page 30, line 3 as follows.

1330 --Nineteenthly, the electrophotographic image forming apparatus 1 is provided for forming an image on a sheet P which is a recording medium to which the process cartridge 2 is detachably mountable, ~~the~~. The electrophotographic image forming apparatus ~~having~~ has--

Please amend the paragraph starting at page 30, line 7 and ending at line 11 as follows.

1331 --(c) the recess 101 which is a non-circular twisted hole provided in the central portion of the main body gear and rotated with the main body gear and ~~of which the~~ whose cross-section has vertices 211c which are a plurality of corners,--

Please amend the paragraph starting at page 30, line 15 and ending at line 16 as follows.

1332 --(e) a mounting portion for detachably mounting the process cartridge 2, ~~the~~. The process cartridge 2 ~~having~~ has--

Please amend the paragraph starting at page 31, line 11 and ending at line 16 as follows.

1333 --the non-circular twisted protrusion 211 fitted into the hole 101 to receive the transmission of the driving force from the main body of the apparatus when the process

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cartridge 2 is mounted to the main body 14 of the apparatus and ~~of which the~~ whose cross-section has a plurality of corners 211c, and--

Please amend the paragraph starting at page 31, line 17 and ending at page 32, line 1 as follows.

1334
--~~wherein an~~ An area rotatably supported by the bearing portion 302 overlaps an area in which the helical gear 213 is provided when the photosensitive drum 20 is mounted in the process cartridge 2 in the axial direction thereof, and the driving-force transmitting part transmits the driving force received from the main body of the apparatus through the hole 101 and the projection 211 to the cylinder 200 through the helical gear 213 and the spur gear 221, and transmits the driving force to the developing roller 41 through the helical gear 213, and transmits the driving force to the transfer roller 70 through the spur gear 221, and--

Please amend the paragraph starting at page 32, line 15 and ending at line 21 as follows.

1335
--Also, by providing a projection shape on the inner side of the rotary sliding portion in addition to the first gear portion and the rotary sliding portion, and by making the projection shape (protrusion) overlap the rotary sliding portion along the axial direction of the first flange, ~~to thereby realize the a~~ further shortening of the full length of the first flange is produced.--

Please substitute the following paragraph for the paragraph starting at page 32, line 22 and ending at page 33, line 6 as follows.

1336 --Further, in the first flange as the driving-force transmitting ~~part~~having part having the projection shape as the driving-force transmitting means, there is provided a construction in which in addition to the first gear portion as the developing device driving means, the second gear portion as the transfer roller driving means is made adjacent to the protrusion, whereby the driving shaft and transfer roller gear of the image forming apparatus are made proximate to each other and an improvement in the positional accuracy between the two is facilitated and as the result, the curtailment of the gear width of the second gear portion is realized.--

Please amend the paragraph starting at page 33, line 14 and ending at line 19 as follows.

1337 --~~White~~ While the invention has been described with reference to the structure disclosed herein, it is not ~~confirmed~~ confined to the details set forth and this application is intended to cover such modifications or changes as may come within the purposes of the improvements or the scope of the following claims.--